DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-002339
Date Inspected: 16-May-2008

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1400
OSM Departure Time: 300
Location:

CWI Name:	Chen Chih-Ming / An Qingxiang			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☐ Yes	☐ No	☑ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG side and bottom panels, tower skin plate

Summary of Items Observed:

On this day CALTRANS OSM Quality Assurance Inspector (QA) Steve Hall was present during the times noted above for observations relative to the fabrication of the SAS Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG new assembly bay 2

QA observed ZPMC personnel installing the first floor beam (FL-1 south) in OBG SEG# 3BE/PP23. QA observed two ZPMC Quality Control (QC) Ultrasonic Testing (UT) technicians UT repaired areas on joint# SEG-019A-004 panels BP21A to BP20A. These areas appeared to be in conformance with AWS D1.5 2002 and the contract documents.

QA observed ZPMC personnel excavating 34 UT repair areas on joint# SEG-017-004 panels BP-15A to BP14A. QA also observed ZPMC personnel excavating 16 UT repair areas on joint# SEG-017A-006 panels SP-48A to SP60A.

QA observed ZPMC QC Magnetic particle Testing (MT) technicians MT joint# SEG-015A-002 panels SP26 to Sp18A.

Other general observations include ZPMC personnel grinding side and bottom panels.

New Tower Bay 1

QA observed ZPMC qualified welding personnel perform SAW on one side of the groove weld joining tower

skin plates, weld# SSD1-SA179O/E-19B and SSD1-SA178A/D-12A following the guide lines of approved WPS# WPS-B-T-2221-B-U3c-S and WPS-B-T-2221-B-U3c-S-1. QA observed 6 ZPMC Quality Control (QC) inspectors in the vicinity of the welding operations including ZPMC CWI identified as An Qingxiang. There were also 2 American Bridge/Fluor (ABF) QC inspectors in the area as well. QC monitored the welding process continuously throughout the evening. The welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

SSD1-SA179O/E-19B SAW
Volts: 32.3 Amps: 650 Travel speed: 660mm/min

SSD1-SA178A/D-12A SAW
Volts: 32.8 Amps: 682 Travel speed: 630mm/min

New Tower Bay 2

QA observed ZPMC qualified welding personnel perform SAW on one side of the groove weld joining tower skin plates, weld# ESD1-SA77A/E-35B and ESD1-SA107A/T-17A following the guide lines of approved WPS# WPS-B-T-2221-B-U3c-S and WPS-B-T-2221-B-U3c-S-1. QA observed 6 ZPMC Quality Control (QC) inspectors in the vicinity of the welding operations including ZPMC CWI identified as An Qingxiang. There were also 2 American Bridge/Fluor (ABF) QC inspectors in the area as well. QC monitored the welding process continuously throughout the evening. The welding parameters as measured with Quality Controls calibrated instruments appeared to be in conformance with the posted WPS's and were as follows:

ESD1-SA77A/E-35B SAW
Volts: 32.8 Amps: 640 Travel speed: 610mm/min

ESD1-SA107A/T-17A SAW
Volts: 34.8 Amps: 653 Travel speed: 620mm/min

QA observed ZPMC qualified welding personnel adding weld metal (buttering) to one edge of tower skin plate identified as P1284. According ZPMC QC inspectors, the first 4130mm of the edge of this plate was incorrectly machined and required 7mm of buildup in order to correct the problem. ZPMC was not using an approved repair procedure instead they were using an internally developed repair report identified as T-WR042 to perform this repair. QA informed QC CWI identified as Mr. An Qingxiang and ABF representative identified as Kevin Dye that an incident report would be submitted concerning this issue. At the time QA departed the area ZPMC had repaired 1470mm of the edge of this plate. QA was informed by ABF QC identified as Mr. Dai Qing Wen that ZPMC has elected not to proceed with the repair until obtaining engineers approval.

Other general observations in the New Tower bays include ZPMC tack welding tower skin plates, weld bevel preparation, flame straightening, CNC parts cutting and grinding.

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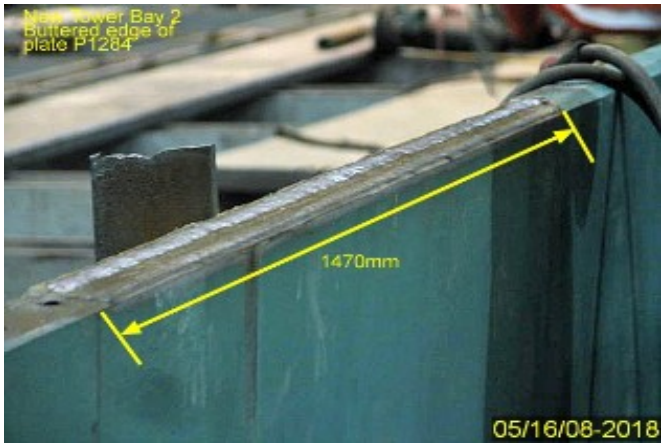

Summary of Conversations:

as noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry (858)-344-2712, who represents the Office of Structural Materials for your project.

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Inspected By:	Hall,Steven	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer